

**50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for *Boerhavia Mathisiana* (Mathis Spiderling)**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes to determine that a plant, *Boerhavia mathisiana* (Mathis spiderling), is an endangered species under the Endangered Species Act of 1973 (Act), as amended. This plant is restricted to privately owned caliche outcrops in Live Oak and San Patricio Counties, Texas. Due to its low numbers and scattered populations, this species is vulnerable to mining, road building, and residential and commercial development. A final determination that *Boerhavia mathisiana* is endangered will implement the protection provided by the Act and will help foster conservation through greater awareness. The Service seeks data and comments from the public on this proposal.

**DATES:** Comments from all interested parties must be received by September 8, 1987. Public hearing requests must be received by August 24, 1987.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103. Comments and materials received will be available for public inspection, by appointment, during normal business hours, at the Service's Regional Office of Endangered Species, 500 Gold Avenue, SW., Room 4000, Albuquerque, New Mexico.

**FOR FURTHER INFORMATION CONTACT:** Sue Rutman, Endangered Species Botanist, Albuquerque, New Mexico

(see "ADDRESSES" above) (505/766-3972 or FTS 474-3972).

#### SUPPLEMENTARY INFORMATION:

##### Background

*Boerhavia mathisiana* is a small perennial herb restricted to caliche ridges and outcrops of the South Texas Plains. The bright white caliche (calcium carbonate) deposits are exposed in several counties, but *Boerhavia mathisiana* only occurs on caliche in San Patricio and Live Oak Counties. The dominant vegetation in the area is Tamaulipan Scrubland, or Mesquite-Blackbrush Brush (McMahan *et al.* 1984). Some common shrubs associated with *Boerhavia mathisiana* are *Acacia rigidula* (blackbrush), *Leucophyllum frutescens* (purple sage), *Acacia berlandieri* (guajillo), and *Calliandra conferta* (fairy duster). *Boerhavia mathisiana* occupies the understory layer of this thorn-scrubland.

The small flowers of *Boerhavia mathisiana* are bright pink, and are born on slender pedicels on the ends of stems. Plants flower from April through December in response to periodic rainfall. Leaves are dark green, ovate with entire or sinuate margins, and oppositely arranged on the stem. The glabrous fruits distinguish this plant from other perennial species of *Boerhavia* which have pubescent fruits. The woody roots of *Boerhavia mathisiana* enable plants to penetrate the caliche surface and to grow in crevices on the sides of caliche outcrops.

*Boerhavia mathisiana* was first collected in 1956 by F.B. Jones at a caliche mining pit in San Patricio County, Texas. Jones (1975) published a formal description of the species in the *Flora of the Texas Coastal Bend*. Since 1956, collections have been made near the type locality and on a caliche outcrop in Live Oak County. Collectors have generally noted that plants are widely scattered and uncommon, and that some populations occur in perilous positions on the edges of active caliche mine pits.

In 1986, the two known populations, both of which are on private land, contained fewer than 250 plants (Gardner and O'Brien 1986). The larger population in San Patricio County was probably a continuous population, but is now fragmented by caliche mines into four colonies. The Live Oak County population consists of fewer than 10 plants, and is probably a remnant of a larger population that previously occurred on the hilltop that is now part of a residential development.

Federal action involving this species began on December 15, 1980, when the Service published a notice of review in the *Federal Register* (45 FR 82480) covering plants being considered for classification as endangered or threatened. *Boerhavia mathisiana* was included in category 1 of this notice, indicating that existing data warranted a proposal to list it as threatened or endangered.

Section 4(b)(3)(B) of the Endangered Species Act, as amended in 1982, requires the Secretary to make findings on certain pending petitions within one year of their receipt. Section 2(b)(1) of the Act's Amendments of 1982 further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. All taxa contained in the 1980 notice, including *Boerhavia mathisiana*, were treated as being newly petitioned on October 12, 1982. On October 13, 1983, October 12, 1984, and October 11, 1985, the Service made one-year findings that the petitioned action to list *Boerhavia mathisiana* was warranted, but precluded by other listing actions of higher priority. Biological data supplied by Turner (1983) fully support a listing of *Boerhavia mathisiana* as endangered. The present proposal is based primarily on Turner's biological data, and constitutes the next one-year finding requirement of section 4(b)(3)(B) of the Act for this species.

##### Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal Lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Boerhavia mathisiana* F.B. Jones (Mathis spiderling) are as follows:

##### A. Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Mining, road building, and commercial and residential development have removed large areas of habitat within the range of this species. Caliche mining is the greatest source of habitat destruction. Since the demand for caliche gravel can be expected to increase, further destruction of habitat is probable. Residential and commercial development is a threat particularly in Live Oak County, where populations

occur on caliche deposits that surround a large lake. Vacation homes, marinas, and access roads have been built on lakefront properties, destroying some *Boerhavia mathisiana* habitat. Caliche outcrops are easily accessible, and this has increased their use as recreation areas, contributing to habitat degradation.

##### B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Because *Boerhavia mathisiana* occurs on private land, it would not be protected from taking by the Endangered Species Act. Due to its easy accessibility, this species is vulnerable to the threat of uncontrolled collecting and vandalism.

##### C. Disease or Predation

No threats are known.

##### D. The Inadequacy of Existing Regulatory Mechanisms

*Boerhavia mathisiana* is not currently protected by either Federal or State laws or regulations.

##### E. Other Natural or Manmade Factors Affecting Its Continued Existence

None known.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list *Boerhavia mathisiana* as endangered without critical habitat. Endangered status is appropriate because populations are scattered and small, and they are restricted to caliche deposits that are threatened by mining, road construction, and residential and commercial development. The reasons for not designating critical habitat are discussed below.

##### Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species that is considered to be critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat for *Boerhavia mathisiana* is not prudent at this time due to its low numbers and easy accessibility. The Act does not protect endangered plants from taking or vandalism on lands that are not under Federal jurisdiction. This would result in an especially severe problem for *Boerhavia mathisiana* because the

habitat is located on private lands that are easily accessible. Listing of a species, with attendant publicity, highlights its rarity and attractiveness to collectors. Publication of critical habitat descriptions for this species would make it more vulnerable to taking or vandalism. Therefore, it would not be prudent to determine critical habitat for *Boerhavia mathisiana* at this time. The location of populations of this plant will be brought to the attention of appropriate agencies and other involved parties through regular communications. No net benefit would accrue from designating critical habitat for this species.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. Although, *Boerhavia mathisiana* is not known to occur on Federal lands and no Federal involvement is currently known or

expected, the Service expects that this listing will elevate the awareness of this plant's status and foster efforts toward its conservation.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plants. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export any endangered plant, transport it in interstate or foreign commerce in the course of a commercial activity, sell or offer it for sale in interstate or foreign commerce, or remove it from areas under Federal jurisdiction and reduce to possession. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. It is anticipated that few trade permits would ever be sought or issued because the species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235-1093).

#### Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of this proposal are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to *Boerhavia mathisiana*;
- (2) The location of any additional populations of *Boerhavia mathisiana* and the reasons why any habitat should or should not be determined to be critical habitat as provided by Section 4 of the Act;
- (3) Additional information concerning the range and distribution of *Boerhavia mathisiana*; and
- (4) Current or planned activities in the subject area and their possible impacts on *Boerhavia mathisiana*.

Final promulgation of the regulation on *Boerhavia mathisiana* will take into consideration the comments and any additional information received by the Service, and such communications may

lead to adoption of a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal if requested. Requests must be filed within 45 days of the date of the proposal. Such requests must be made in writing and addressed to the Regional Director (see "ADDRESSES" section).

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

#### References Cited

- Gardner, S. and R. O'Brien. 1986. Status survey update on *Boerhavia mathisiana*. U.S. Fish and Wildlife Service, Albuquerque, New Mexico. 9 pp.
- Jones, F.B. 1975. Flora of the Texas Coastal Bend. Mission Press, Corpus Christi, Texas. 262 pp.
- McMahan, C.A., R.G. Frye, and K.L. Brown. 1984. The Vegetation Types of Texas Including Cropland. Texas Parks and Wildlife Department, Austin, Texas. 41 pp. + map.
- Turner, B.L. 1983. Status Survey on *Boerhavia mathisiana*. U.S. Fish and Wildlife Service, Albuquerque, New Mexico. 9 pp.

#### Author

The primary author of this proposed rule is Sue Rutman, Endangered Species Botanist, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103 (505/766-3972). The editor is LaVerne Smith, Office of Endangered Species, Washington, DC 20240. Status information was provided by Dr. B.L. Turner, University of Texas at Austin, Texas, and Dr. S. Gardner and R. O'Brien, Corpus Christi Botanical Society, Texas.

#### List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

#### Proposed Regulation Promulgation

#### PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 811; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. It is proposed to amend § 17.12(h) by adding the following, in alphabetical order under the family Nyctaginaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants

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(h) \* \* \*

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Nyctaginaceae—Four-o'clock family:						
Boerhaavia mathisiana	Mathis spiderling	U.S.A. (TX)	E		NA	NA

Dated: June 19, 1987.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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